

From planning learning paths to assessment: Innovations to the practical benefits of Learning Design

Davinia Hernández-Leo, Ayman Moghnieh, Toni Navarrete,
Josep Blat, Sandra Gilabert, Patricia Santos, Mar Pérez

Interactive Technologies Group (**GTI**), ICT Department

Universitat Pompeu Fabra, Barcelona, Spain

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<http://gti.upf.edu>

Overview

- Context: TENCompetence Project
- Role of Learning Design in TENCompetence
- GTI innovations to the practical benefits of LD:
 - Graphical planner of personal learning paths
 - Flexible support of (IMS) LD at runtime
 - Test-based assessment using (IMS) QTI
- Conclusion

TENCompetence Project

- IST/TEL Integrated Project – Sixth Framework Programme, EC
- December 2005 – November 2009
- 15 core partners + Associate Partners
- Aim: to build a technical and organizational infrastructure for **lifelong competence development**

TENCompetence Focus

- Supporting **individuals** in development of their competences during the whole life
 - I want to (further) develop a specific competence
 - I want a better job position
 - I want a new or different job
 - I want to keep my competences up-to-date
 - ...

Role of LD in TENCompetence

- **Community:** A domain representing a certain profession. Users can collaborate within the context of a certain community
- **Competence profile:** A set of Competences that define the minimum requirements for a specific function/job
- **Competence:** The estimated ability of an actor to deal with critical events, problems or tasks that can occur in a certain situation (at work, at home, etc.)
- **Competence development plan: (CDP; synonyms: route, learning path, curriculum, programme) An ordered set of activities and units of learning that have to be followed to attain a certain Competence**

↑
(IMS) Learning Design

(Some) tooling

Competence Development Plan

Composed of ↓

Activities or/and
IMS LD **units of learning**

May include ↓

IMS QTI **items**
(assessment)

Personal Development Plan tool (PDP)
with a **graphical planner**_{GTI}

authoring
ReCourse editor (Creating LDs) with
a plug-in for creating QTI items,
allows addition of Widgets

runtime
SLeD player integrated with a
Widget server, and an **updated QTI**
engine_{GTI} (APIS)

Also: **new QTI interaction type for**
graphical exploration_{GTI}

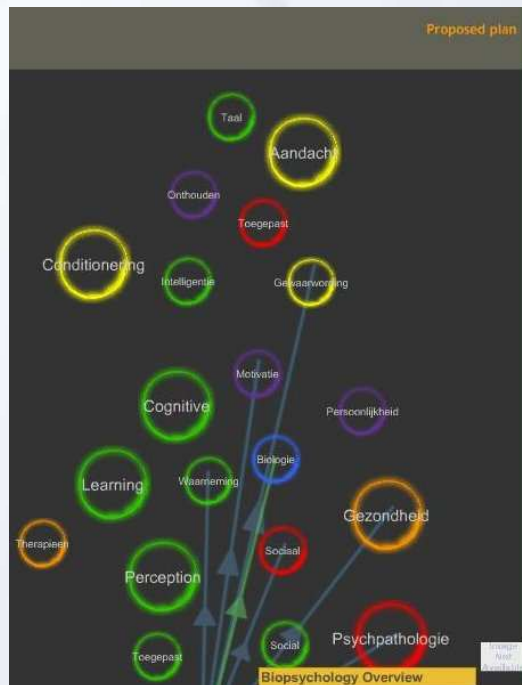
Also: **flexible support of LD at**
runtime_{GTI}



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Graphical planner (I)

- Provide a personalized **view** on all the available UoLs to support **Learner's planning** of a CDP

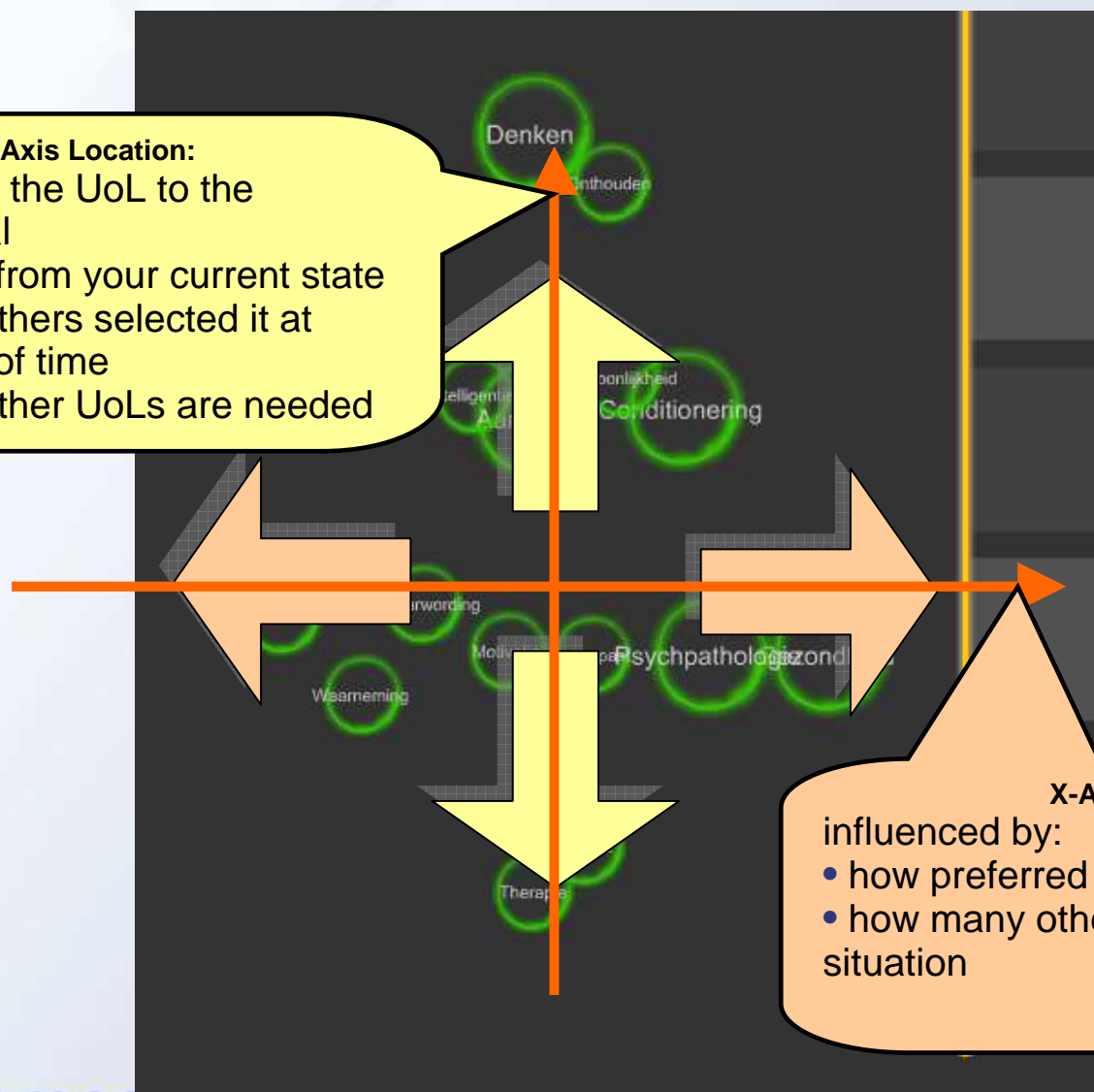


- Use personalization services (positioning, navigation, preference, curriculum) developed in TENCompetence

Graphical planner (II)

Y-Axis Location:

- how close is the UoL to the learning goal
- how far is it from your current state
- how many others selected it at which point of time
- how many other UoLs are needed



X-Axis Location:

influenced by:

- how preferred is UoL
- how many others selected in a similar situation

Flexible support of LD at runtime

- Developing templates that can be refined / particularized at runtime (enabling authoring at runtime)
- Flexibility desirable in general, specific requirements in:
 - Collaborative learning: group members dependence
 - Particular educational methodologies, e.g., dialogic learning for (non-formal) adult education (democratic participation even in the design of the learning process)



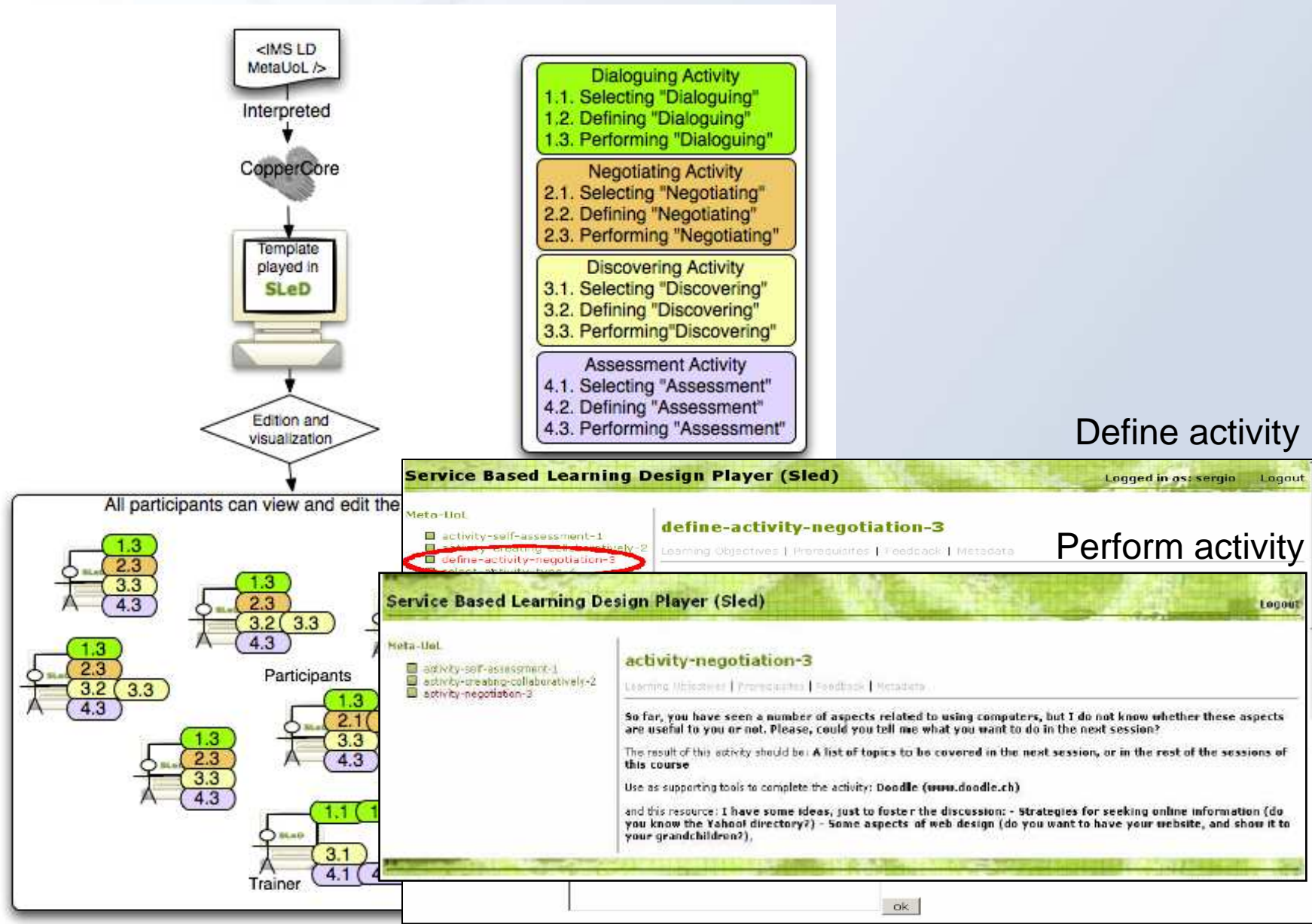
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An approach to support flexibility (I)

- Dialogic learning and interactive groups: an IMS LD template integrated in runtime systems
- **Principles of dialogic learning** (Egalitarian dialogue, Cultural intelligence...) and **actual practice** in La Verneda School for adult education → input for a **metaUoL with seven possible activities**
- Usage: Any participant can
 - 1) Select “activity type”, (Negotiating, Dialoguing, Sharing, Discovering...)
 - 2) Define/configure the activity (description, tool, input/output artifacts)
 - 3) Perform the activity (with the rest of participants)
- metaUoL computationally represented with **IMS LD level C** (can be interpreted by any IMS LD compliant player)
- Tested with two trainers of La Verneda. Paper to be published at iJET

An approach to support flexibility (II)

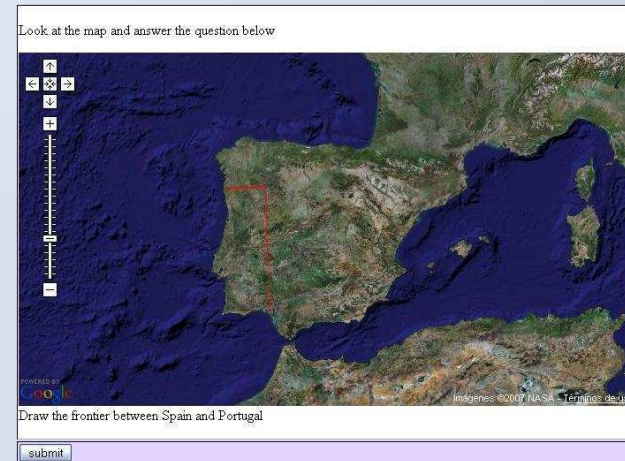


New QTI interaction type for graphical exploration

- New forms of interaction in IMS QTI (graphical exploration)
- Example implemented: Google Maps embedded in QTI items (edition and runtime)

- Video:

http://www.sled.upf.edu/activities/videos/Demo_Exam_qti_gmaps/Demo_Exam_qti_gmaps.html



Conclusion

- From planning learning paths to assessment: innovations to the practical benefits of Learning Design
- GTI is currently:
 - Finalizing the graphical planner
(to be evaluated in September/October)
 - Exploring new solutions to provide flexibility; planning new experiences in La Verneda
 - In the process of evaluating the use of Google Maps embedded in QTI items. Aiming at embedding other Web2.0 services in test items

Validation of TENCompetence

- An increasing number of **associated partners** have enlisted to help develop, demonstrate and pilot the project outcomes.

Participation is invited from all interested parties particularly SMEs.

- **Pilot proposals** are welcome

Contact

- Project website
www.tencompetence.org
- GTI website
<http://gti.upf.edu>
- Davinia Hernández-Leo
davinia.hernandez@upf.edu
<http://www.tecn.upf.edu/~daviniah>

Thank you!